

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (Cancelled)

14. (Currently Amended) A pen-based computing system for estimating the orientation of a segment of digital ink, the system including a pen-based computing pen to input digital ink, and a processor adapted to estimate the orientation of said segment by measuring the azimuth of the pen at a sampling rate during ~~writer-generation of a plurality of digital ink training-text characters~~ writing of said segment by an optically imaging pen on a surface printed with tags, each tag encoding data on an identity of the surface associated with a digital description of the surface and on the respective location of that tag on the surface, the digital ink being generated by associating the digital description with the data encoded by the tags optically imaged by the pen during said writing; determining a mean azimuth for all of the sampled points ~~of said training-text characters,~~ measuring the azimuth of the pen at a sampling rate during ~~writer-generation of said segment,~~ and subtracting the determined mean azimuth from each measured azimuth of each sampled point of said segment.

15. (Cancelled)

16. (Cancelled)

17. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to use the estimated orientation of the segment of digital ink in a digital ink line orientation normalization technique.

18. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to use a single, fixed orientation estimation for a line of digital ink.

19. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to use an orientation estimation that varies across a line of digital ink.

20. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to normalize the estimated orientation to be within the range of 0° to 360°.

21. (Previously Presented) A system as claimed in claim 14, wherein the segment of digital ink is more than one character of digital ink.

22. (Previously Presented) A system as claimed in claim 14, wherein the segment of digital ink is a line segment.

23. (Previously Presented) A system as claimed in claim 22, wherein the processor is further adapted to perform line segmentation by measuring a change in azimuth value.

24. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to use a writer independent handwriting model to estimate the orientation.

25. (Previously Presented) A system as claimed in claim 14, wherein the processor is further adapted to use a writer dependent handwriting model trained using sample digital ink input by the writer to estimate the orientation.

26. (Previously Presented) A system as claimed in claim 25, wherein the writer dependent handwriting model is trained using sample digital ink input by the writer using a consistent baseline.

27. (Previously Presented) A system as claimed in claim 25, wherein the writer dependent handwriting model is trained using arbitrary sample digital ink input by the writer.